

I-Resolutions Inc.

An Independent Review Organization

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Notice of Independent Review Decision

DATE OF REVIEW: AUGUST 7, 2008

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Left Facet Joint Steroid Injection at L2/3, L3/4, and L4/5 with Fluoroscopy

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION

MD, Board Certified in Physical Medicine and Rehabilitation
Board Certified in Pain Management

REVIEW OUTCOME

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be:

- Upheld (Agree)
- Overturned (Disagree)
- Partially Overturned (Agree in part/Disagree in part)

Provide a description of the review outcome that clearly states whether or not medical necessity exists for each of the health care services in dispute.

The reviewer finds that medical necessity does not exist for Left Facet Joint Steroid Injection at L2/3, L3/4, and L4/5 with Fluoroscopy.

INFORMATION PROVIDED TO THE IRO FOR REVIEW

Adverse Determination Letters, 7/15/08, 7/22/08

ODG Guidelines and Treatment Guidelines

, 7/7/08

, MD, 7/9/08, 6/2/08, 5/5/08, 4/7/08, 3/12/08, 2/29/08, 2/1/08, 1/10/08

, MD, 7/3/08, 5/29/08, 4/24/08, 4/3/08, 3/13/08, 3/27/08

MRI of Lumbar Spine, 2/19/08

, MD, 6/11/08

PATIENT CLINICAL HISTORY [SUMMARY]:

This is a xx year old . He underwent a microdiscectomy at L5/S1 in 2001. He did well until xx/xx/xx, when he was injured while lifting his toolbox. He developed back pain going to the left thigh. He also has some low back pain on the right side. His MRI on 2/19/08 showed facet degeneration at L3/4, L4/5 and L5/S1 with a left disc protrusion and narrowing and high intensity zone fissure at L4/5 with the post laminectomy changes and disc herniation at L5/S1. The patient's MRI did not describe any facet degeneration at L2-3. The patient had a favorable response of his left lower extremity pain following a L5 selective root block on 3/27/08, but he has had ongoing back pain. There was a request for facet injections. There is no neurological loss.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION

The reviewer finds that medical necessity does not exist for Left Facet Joint Steroid Injection at L2/3, L3/4, and L4/5 with Fluoroscopy.

This patient does not meet the ODG criteria for Left Facet Joint Steroid Injection at L2/3, L3/4, and L4/5 with Fluoroscopy. The intraarticular injections are only permitted for two levels according to the criteria presented for diagnostic blocks. The request here is for three levels, L2-3, L3-4 and L4-5.

Facet joint diagnostic blocks (injections)

Recommend no more than one set of medial branch diagnostic blocks prior to facet neurotomy, if neurotomy is chosen as an option for treatment (a procedure that is still considered "under study").

Diagnostic blocks may be performed with the anticipation that if successful, treatment may proceed to facet neurotomy at the diagnosed levels. Current research indicates that a minimum of one diagnostic block be performed prior to a neurotomy, and that this be a medial branch block (MBB). **Although it is suggested that MBBs and intra-articular blocks appear to provide comparable diagnostic information, the results of placebo-controlled trials of neurotomy found better predictive effect with diagnostic MBBs. In addition, the same nerves are tested with the MBB as are treated with the neurotomy. The use of a confirmatory block has been strongly suggested due to the high rate of false positives with single blocks (range of 25% to 40%) but this does not appear to be cost effective or to prevent the incidence of false positive response to the neurotomy procedure itself.** ([Cohen, 2007](#)) ([Bogduk, 2000](#)) ([Cohen2, 2007](#)) ([Mancchukonda, 2007](#)) ([Dreyfuss, 2000](#)) ([Manchikanti2, 2003](#)) Etiology of false positive blocks: Placebo response (18-32%), use of sedation, liberal use of local anesthetic, and spread of injectate to other pain generators. The concomitant use of sedative during the block can also interfere with an accurate diagnosis. ([Cohen, 2007](#))

MBB procedure: The technique for medial branch blocks in the lumbar region requires a block of 2 medial branch nerves (MBN). The recommendation is the following: (1) L1-L2 (T12 and L1 MBN); (2) L2-L3 (L1 and L2 MBN); (3) L3-L4 (L2 and L3 MBN); (4) L4-L5 (L3 and L4 MBN); (5) L5-S1: the L4 and L5 MBN are blocked, and it is recommended that S1 nerve be blocked at the superior articular process. ([Clemans, 2005](#)) The volume of injectate for diagnostic medial branch blocks must be kept to a minimum (a trace amount of contrast with no more than 0.5 cc of injectate), as increased volume may anesthetize other potential areas of pain generation and confound the ability of the block to accurately diagnose facet pathology.

Specifically, the concern is that the lateral and intermediate branches will be blocked; nerves that innervate the paraspinal muscles and fascia, ligaments, sacroiliac joints and skin. ([Cohen, 2007](#)) **Intraarticular blocks also have limitations due to the fact that they can be technically challenging, and if the joint capsule ruptures, injectate may diffuse to the epidural space, intervertebral foramen, ligamentum flavum and paraspinal musculature.** ([Cohen, 2007](#)) ([Washington, 2005](#)) ([Manchikanti, 2003](#)) ([Dreyfuss, 2003](#)) ([BlueCross BlueShield, 2004](#)) ([Pneumaticos, 2006](#)) ([Boswell, 2007](#)) ([Boswell2, 2007](#)) See also [Facet joint pain, signs & symptoms](#); [Facet joint radiofrequency neurotomy](#); [Facet joint medial branch blocks](#) (therapeutic injections); & [Facet joint intra-articular injections](#) (therapeutic blocks). Also see [Neck Chapter](#) and [Pain Chapter](#).

Criteria for the use of diagnostic blocks for facet “mediated” pain:

1. One set of diagnostic medial branch blocks is required with a response of $\geq 70\%$. The pain response should be approximately 2 hours for Lidocaine.
2. Limited to patients with low-back pain that is non-radicular and at no more than two levels bilaterally.
3. There is documentation of failure of conservative treatment (including home exercise, PT and NSAIDs) prior to the procedure for at least 4-6 weeks.
- 4. No more than 2 joint levels are injected in one session (see above for medial branch block levels).**
5. Recommended volume of no more than 0.5 cc of injectate is given to each joint.
6. No pain medication from home should be taken for at least 4 hours prior to the diagnostic block and for 4 to 6 hours afterward.
7. Opioids should not be given as a “sedative” during the procedure.
8. The use of IV sedation (including other agents such as midazolam) may be grounds to negate the results of a diagnostic block, and should only be given in cases of extreme anxiety.
9. The patient should document pain relief with an instrument such as a VAS scale, emphasizing the importance of recording the maximum pain relief and maximum duration of pain. The patient should also keep medication use and activity logs to support subjective reports of better pain control.
10. Diagnostic facet blocks should not be performed in patients in whom a surgical procedure is anticipated. ([Resnick, 2005](#))
11. Diagnostic facet blocks should not be performed in patients who have had a previous fusion procedure at the planned injection level.

Facet joint intra-articular injections (therapeutic blocks)

Under study. Current evidence is conflicting as to this procedure and at this **time no more than one therapeutic intra-articular block is suggested.** If successful (pain relief of at least 50% for a duration of at least 6 weeks), the recommendation is to proceed to a medial branch diagnostic block and subsequent neurotomy (if the medial branch block is positive). If a therapeutic facet joint block is undertaken, it is suggested that it be used in consort with other evidence based conservative care (activity, exercise, etc.) to facilitate **functional improvement.** ([Dreyfuss, 2003](#)) ([Colorado, 2001](#)) ([Manchikanti, 2003](#)) ([Boswell, 2005](#)) See [Segmental rigidity](#) (diagnosis). **In spite of the overwhelming lack of evidence for the long-term effectiveness of intra-articular steroid facet joint injections, this remains a popular treatment modality. Intra-articular facet joint injections have been popularly utilized as a therapeutic procedure, but are not currently recommended as a treatment modality in most evidence-based reviews as their benefit remains controversial.** The therapeutic facet joint injections described here are injections of a steroid (combined with an anesthetic agent) into the facet joint under fluoroscopic guidance to provide temporary pain relief. ([Dreyfuss, 2003](#)) ([Nelemans-Cochrane, 2000](#)) ([Carette, 1991](#)) ([Nelemans, 2001](#)) ([Slipman, 2003](#)) ([van Tulder, 2006](#)) ([Colorado, 2001](#)) ([ICSI, 2004](#)) ([Bogduk, 2005](#)) ([Resnick, 2005](#)) ([Airaksinen, 2006](#))

Systematic reviews endorsing therapeutic intra-articular facet blocks:

Pain Physician, 2005: In 2005 there were two positive systematic reviews published in Pain Physician that stated that the evidence was moderate for short-term and limited for long-term improvement using this intervention. ([Boswell, 2005](#)) ([Boswell, 2005](#)) These results were based, in part, on five observational studies. These non-controlled studies were confounded by variables such as lack of confirmation of diagnosis by dual blocks and recording of subjective pain relief, or with measures that fell under verbal rating and/or pain relief labels (measures that have been reported to have problems with validity). ([Edwards, 2005](#)) Pain Physician, 2007: Pain Physician again published a systematic review on this subject in 2007 and added one additional randomized trial comparing intra-articular injections with sodium hyaluronate to blocks with triamcinolone acetonide. The diagnosis of facet osteoarthritis was made radiographically. ([Fuchs, 2005](#)) Two randomized trials were not included, in part, as they failed to include controlled diagnostic blocks. These latter articles were negative toward the use of therapeutic facet blocks. ([Lilius, 1989](#)) ([Marks, 1992](#)) An observational non-controlled study that had positive results was included that made the diagnosis of lumbar facet syndrome based on clinical assessment of “pseudoradicular” lumbar pain, including evidence of an increase of pain in the morning and with excessive stress and exercise (no diagnostic blocks were performed). ([Schulte, 2006](#)) With the inclusion of these two articles the conclusion was changed so that the evidence for lumbar intra-articular injections was “moderate” for both short-and long-term improvement of low back pain. ([Boswell2, 2007](#))

Complications: These included suppression of the hypothalamic-pituitary-adrenal axis for up to 4 weeks due to steroids with resultant elevated glucose levels for less than a week. ([Ward, 2002](#)) There have been rare cases of infection (septic arthritis, epidural abscess and meningitis). ([Cohen, 2007](#)) Complications from needle placement include dural puncture, spinal cord trauma, intraarterial and intravenous injection, spinal anesthesia, neural trauma, pneumothorax, and hematoma formation. ([Boswell2, 2007](#))

Single photon emission computed tomography: (bone scintigraphy, SPECT scan): Not recommended although recent research is promising. This technique is recommended based on the ability of radionuclide bone scintigraphy to detect areas of increased function, depicting synovial areas of inflammation as well as degenerative changes. Thirteen of 15 patients had a > 1 standard deviation pain score improvement at 1

month versus 7 of 32 patients with a negative or no scan. The benefit of the injection lasted for approximately 3 months and did not persist to 6 months. ([Pneumatics2, 2006](#)) See also [Facet joint diagnostic blocks](#) (injections); [Facet joint pain, signs & symptoms](#); [Facet joint radiofrequency neurotomy](#); [Facet joint medial branch blocks](#) (therapeutic injections); & [Segmental rigidity](#) (diagnosis). Also see [Neck Chapter](#) and [Pain Chapter](#).

Criteria for use of therapeutic intra-articular and medial branch blocks, are as follows:

1. No more than one therapeutic intra-articular block is recommended.
2. There should be no evidence of radicular pain, spinal stenosis, or previous fusion.
3. If successful (pain relief of at least 50% for a duration of at least 6 weeks), the recommendation is to proceed to a medial branch diagnostic block and subsequent neurotomy (if the medial branch block is positive).
4. **No more than 2 joint levels may be blocked at any one time.**
5. **There should be evidence of a formal plan of additional evidence-based activity and exercise in addition to facet joint injection therapy.**

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

- ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE
- AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES
- DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES
- EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN
- INTERQUAL CRITERIA
- MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS
- MERCY CENTER CONSENSUS CONFERENCE GUIDELINES
- MILLIMAN CARE GUIDELINES
- ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES
- PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR
- TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS
- TEXAS TACADA GUIDELINES
- TMF SCREENING CRITERIA MANUAL
- PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)
- OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)